



CHEMISTRY NMDCAT

(UNIT-10)

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03418729745(WhatsApp Groups)

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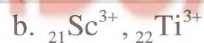
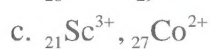
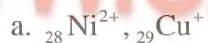
TOPICS

- ✓ **TRANSITION ELEMENTS**
- ✓ **ENVIRONMENTAL CHEMISTRY**

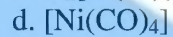
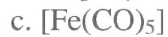
- Q.1** Which one pair has the same oxidation state of 'Cu'?
- a. $[\text{Cu}(\text{NH}_3)_4]\text{SO}_4$, CuSO_4 b. CuCl_2 , Cu_2O
- c. Cu_2Cl_2 , CuSO_4 d. Cu , $[\text{Cu}(\text{NH}_3)_4]^{+2}$
- Q.2** $[\text{Ti}(\text{H}_2\text{O})_6]^{3+}$ looks violet because it absorbs _____ light.
- a. Red b. White
- c. Purple d. Yellow
- Q.3** Acid rain has pH
- a. 7 b. 5.6
- c. Less than 5 d. Greater than 7
- Q.4** If a compound have coordination number 2, it has _____ geometry
- a. Triangular planar b. Octahedral
- c. Tetrahedral d. Linear
- Q.5** Which oxide is major source of acid deposition in atmosphere
- a. NO_2 b. CO_2
- c. SO_2 d. Al_2O_3
- Q.6** Temporary acid rain in areas of volcanic eruption is due to
- a. SO_2 b. NO_2
- c. CO_2 d. HCl
- Q.7** Acid rain causes damage to
- a. Building materials b. Plants
- c. Aquatic life d. All of these
- Q.8** d-block elements are called as
- a. Normal elements b. Representative elements
- c. Inner transition elements d. Outer transition elements
- Q.9** First transition series consist of _____ elements
- a. 20 b. 10
- c. 40 d. 8
- Q.10** Which complex from the following can show geometrical isomerism
- a. $[\text{Pt}(\text{C}_2\text{O}_4)_2]^{-2}$ b. $[\text{Co}(\text{NH}_3)_6]^{+3}$



- c. $[\text{PtCl}_2(\text{NH}_3)_2]$ d. $[\text{Cu}(\text{NH}_3)_4]^{+2}$
- Q.11** Which electronic configuration represents the tri-positive cation with atomic number 23
- a. $[\text{Ar}] 3d^1, 4s^2$ b. $[\text{Ar}] 4s^0, 3d^2$
c. $[\text{Ar}] 3d^3, 4s^0$ d. $[\text{Ar}] 3d^3, 4s^2$
- Q.12** Which two elements of first transition series show anomalous electronic configuration
- a. Cu and Zn b. Cr and Cu
c. Mn and Ni d. Sc and Co
- Q.13** Oxidation state of first transition series increases upto
- a. Ni b. Cu
c. Mn d. Fe
- Q.14** Electronic configuration of Nickel (Ni) is
- a. $[\text{Ar}] \begin{array}{|c|c|c|c|c|c|} \hline \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow\downarrow \\ \hline \end{array}$ b. $[\text{Ar}] \begin{array}{|c|c|c|c|c|c|} \hline \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow\downarrow \\ \hline \end{array}$
c. $[\text{Ar}] \begin{array}{|c|c|c|c|c|c|} \hline \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow \\ \hline \end{array}$ d. $[\text{Ar}] \begin{array}{|c|c|c|c|c|c|} \hline \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow\downarrow \\ \hline \end{array}$
- Q.15** Colour of transition metal complexes is due to
- a. Variable oxidation state b. d-d Transition
c. Unpaired electrons d. High ionization energy
- Q.16** Most common oxidation state shown by 3-d transition elements are
- a. +2 b. +3
c. +1 d. +4
- Q.17** In which complex transition metal show zero oxidation state
- a. $\text{K}_4[\text{Fe}(\text{CN})_6]$ b. $[\text{Ni}(\text{CO})_4]$
c. $[\text{Ag}(\text{NH}_3)_2]\text{Cl}$ d. $\text{K}_2[\text{Pt}(\text{Cl})_6]$
- Q.18** All are bidentate except
- a. Oxalato b. Hydrazine
c. Cyano d. Phenyl hydrazine
- Q.19** The central metal atom or ion along with ligands is called
- a. Co-ordination sphere b. Co-ordination Number
c. Co-ordination compound d. Chelate
- Q.20** Which catalyst is commonly used during hydrogenation of vegetable oil
- a. Pt b. Pd
c. Ni d. All of these
- Q.21** Correct name of the given complex is $[\text{Pt Cl}(\text{NO}_2)(\text{NH}_3)_4]\text{SO}_4$
- a. Tetraammine chloronitro platinum (IV) Sulphate
c. Tetraammine chloronitro platinum (II) Sulphate
b. Tetraammine chloronitro nitrochloro (II) Sulphate
d. Tetraammine chloronitro nitrochloro (IV) Sulphate
- Q.22** Which element shows maximum unpaired electron in +3 oxidation state
- a. Fe b. Cr
c. Mn d. Co
- Q.23** Which complex is more stable?
- a. $[\text{Ni}(\text{CO})_4]$ b. $\text{K}_4[\text{Fe}(\text{CN})_6]$
c. $[\text{Pt}(\text{C}_2\text{O}_4)_2]^{-2}$ d. $[\text{MnCl}_4]^{-2}$
- Q.24** In which of the following pairs both the ions are coloured in aqueous solution



Q.25 Which of the following transition metal complex has dsp^3 hybridization



Q.26 Maximum binding energy among 3d series is shown by

a. Ti

b. V

c. Cr

d. Mn

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Q.27 The general electronic configuration of first outer transition series (d-Block) is

- a. $nd^{1-10} (n-1)s^{1-2}$
- b. $(n-1)d^{1-10} ns^{1-2}$
- c. $nd^{1-10} ns^{1-2}$
- d. $(n-1)d^{1-10} (n-1)s^{1-2}$

Q.28 Which of the following group contains coinage metals

- a. IB
- b. IIB
- c. IIIB
- d. IVB

Q.29 The magnetic moment (μ) is related to the number of unpaired electrons (n) by the equation

- a. $\mu = \sqrt{n+2}$
- b. $\mu = n\sqrt{n+2}$
- c. $\mu = \sqrt{n(n+2)^2}$
- d. $\mu = \sqrt{n(n+2)}$

Q.30 Which of the following element is not ferromagnetic in nature

- a. Fe
- b. Co
- c. Ni
- d. Zn

Q.31 Catalyst used for decomposition of hydrogen peroxide is

- a. V_2O_5
- b. MnO_2
- c. ZnO
- d. Cr_2O_3

Q.32 Bronze is an alloy of

- a. Cu and Zn
- b. Cu and Sn
- c. Cu and Ni
- d. Zn and Fe

Q.33 A hexadentate ligand is

- a. Ethylene diammine
- b. Ethylene diammine tetraacetate
- c. Ethylene Glycol
- d. Glycerol

Q.34 Non-Typical transition element of IIIB group is

- a. Zn
- b. Cd
- c. Sc
- d. Hg

Q.35 Which of the following group show the abnormal electronic configuration

- a. IIIB
- b. IIB
- c. VIB
- d. IVB

Q.36 The formation of ozone in the atmosphere is carried out by:

- a. Oxidation
- b. Photochemical reactions
- c. Reduction
- d. Redox reactions



- Q.37 Air pollution causes:**
- Respiratory troubles in older people
 - Acid rain
 - The depletion of the ozone layer
 - All of the above
- Q.38 Which statement is wrong:**
- The amount of ozone is greater in the region closer to the equator
 - Ozone acts as filter for UV radiations
 - In the polar region it acts as pollutant
 - CFCs play effective role in removing O_3 in the stratosphere
- Q.39 Which of these reactions in the atmosphere leads to acid rain?**
- Chlorine + water vapours \rightarrow hypochlorous acid
 - Sulphur trioxide + water \rightarrow sulphuric acid
 - Sulphur + oxygen \rightarrow sulphur dioxide
 - Carbon dioxide + hydrogen \rightarrow hydrogen carbonate
- Q.40 Peroxyacetyl-nitrate affects:**
- Eyes
 - Stomach
 - Ears
 - Nose
- Q.41 Plastics are pollution problem because many plastics:**
- Burn to produce toxic ash
 - Burn to produce toxic fumes
 - Disintegrate to produce radiations
 - Decompose to produce toxic fumes
- Q.42 A single chlorine free radical can destroy how many ozone molecules:**
- 100
 - 10000
 - 100000
 - 10
- Q.43 The gas that binds strongly with haemoglobin and forms a complex is:**
- Carbon monoxide
 - Methane
 - Carbon dioxide
 - Nitrogen dioxide
- Q.44 The normal amount of overhead ozone is about**
- 150 DU
 - 350 DU
 - 250 DU
 - 450 DU
- Q.45 The better substituent for CFCs to avoid O_3 depletion is**
- Freon
 - Hydrofluorocarbons
 - Fluoro-chloro methanes
 - All of these
- Q.46 The metal leached by acid rain of soil and causes suffocation in gills of fishes**
- Calcium
 - Aluminium
 - Magnesium
 - Iron
- Q.47 Paddy fields produce a significant amount of _____ in the atmosphere as a pollutant**
- CO
 - CO₂
 - CH₄
 - SO_x
- Q.48 The temperature in troposphere decreases with the increasing altitude, from**
- 56°C to 15°C
 - 2°C to -56°C
 - 56°C to -2°C
 - 15°C to -56°C
- Q.49 Ozone hole refers to**
- A hole in ozone layer
 - Reduction in thickness in ozone layer in stratosphere
 - Reduction in thickness in ozone layer in troposphere
 - Increased concentration of ozone
- Q.50 Residence time of NO and NO₂ in atmosphere respectively**
- 3 and 4 days
 - 3 and 2 days
 - 4 and 3 days
 - 4 and 2 days



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Chem T-10

Chemistry				
01- a	11- b	21- a	31- b	41- b
02- d	12- b	22- a	32- b	42- c
03- c	13- c	23- c	33- b	43- a
04- d	14- d	24- d	34- c	44- b
05- c	15- b	25- c	35- c	45- B
06- d	16- a	26- b	36- b	46- b
07- d	17- b	27- b	37- d	47- c
08- d	18- c	28- a	38- a	48- d
09- b	19- a	29- d	39- b	49- b
10- c	20- d c	30- d	40- a	50- c
Anjan				

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Regards.Huzaiifa Saeed,Usama Sohail

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185+ 218 Students

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